Nonhazardous Solid Waste Management and Landfill Capacity in Illinois

2000 Annual Report

Topics Covered

- Specification pages for 62 landfills, 94 transfer stations and 58 compost sites
- Remaining disposal capacity as of Jan. 1, 2000 and Jan. 1, 2001
- Waste generated and recycled, 2000
- Waste handled by transfer stations, 1998-2000
- Waste composted, 1998-2000
Nonhazardous Solid Waste Management And Landfill Capacity In Illinois: 2000

Reporting period for waste disposal: Jan. 1 to Dec. 31, 2000
Reporting date for landfill capacity: Jan. 1, 2001

This report has been prepared for the Governor of the State of Illinois and the General Assembly in accordance with Section 4 of the Illinois Solid Waste Management Act.

Illinois Environmental Protection Agency
Bureau of Land
Division of Land Pollution Control
Solid Waste Management Section

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P.O. Box 19276
Springfield, Ill. 62794-9276

Printed on recycled paper.
How to Obtain Additional Information

To learn more about municipal solid waste landfills, transfer stations or compost facilities in Illinois, please call 217-785-8604, or write to:

Illinois Environmental Protection Agency
Bureau of Land
Solid Waste Management Section
P.O. Box 19276
Springfield, IL  62794-9276

Our Internet address is [http://www.epa.state.il.us](http://www.epa.state.il.us)

When using courier services (UPS, Airborne, etc.), please use the following street address and zip code:

1021 North Grand Ave. East
Springfield, IL 62702

Acknowledgements

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Illinois EPA Bureau of Land personnel contributed their time and expertise to the development of this publication. Primary Editor was Ellen Gambach of the Solid Waste Management Section. Assistance with compost site permitting and reporting was provided by Gary Cima and Joanie McMillan. Details about new permits issued to transfer stations and landfills was provided by Chris Liebman and Ted Dragovich of Permit Section. Neelu Reddy of Remedial Project Management Section provided information about Illinois FIRST abandoned landfill program; and Jim Moore, explained closure procedures.

The Agency also wishes to thank the 18 delegated counties, plus Ambraw Valley Solid Waste Agency and the City of Chicago who inspect and have first-hand knowledge of approximately 50 percent of the landfills, transfer stations and compost sites written about in this report. Our seven regional offices and their regional managers are responsible for inspecting all Agency-permitted pollution control facilities.
Photo Credits

**Cover Photo:** Photo of Cottonwood Hills RDF by Chuck Schaeffer, Inspector, St. Clair County Health Department, Belleville

**Region 1:** Photo of Onyx Orchard Hills Landfill by Joy Bliton, Inspector, Ogle County Solid Waste Management Department, Oregon

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**Region 3:** Photo of Spoon Ridge RDF by Larry Dutton, Environmental Protection Specialist, Illinois Environmental Protection Agency, Peoria Regional Office

**Region 4:** Photo of Livingston Landfill by Ken Keigley, Environmental Protection Specialist, Illinois Environmental Protection Agency, Champaign Regional Office

**Region 5:** Photo of Five Oaks RDF by Weldon Kunzeman, Inspector, Christian County Solid Waste Management, Taylorville

**Region 6:** Photo of Milam RDF by David Walchshauser, former Environmental Protection Program Specialist, St. Clair County Health Department, Belleville

**Region 7:** Photo of Southern Illinois Regional Landfill by George Browning, Inspector, Jackson County Health Department, Murphysboro
INCE ITS ESTABLISHMENT IN 1970, THE ILLINOIS EPA has overseen the development and operation of a productive system of modern sanitary landfills. The Agency ensures that these facilities meet the strictest disposal standards in history, and that they are engineered to be fully protective of human health and the environment, especially where it concerns any possibility of groundwater contamination.

This is the Agency’s 14th annual report on landfill disposal and available landfill capacity in Illinois. The number of active landfills in Illinois accepting waste in 2000 remained 53. Sufficient capacity exists to handle the state’s requirements for landfill disposal of nonhazardous solid waste for the next 15 years.

Regional capacity may be a different matter. The Chicago Metropolitan and East Central Illinois areas have only seven and eight years remaining; more transfer stations are needed to transport waste outside Chicagoland. There is also a possibility of landfill expansions. Solid waste planners are especially concerned about this area of the State. Region 7 (Southern Illinois) has two new facilities under development: Perry Ridge Landfill and West End Disposal Facility. The state’s newest landfill is Cottonwood Hills RDF near East St. Louis which opened in October, 2000.

The State of Illinois, seeking to avoid potential crises, has asked all Illinois counties to adopt and update every five years well-conceived plans to accommodate their future disposal needs. Eighty-one five year plan updates and eight ten year plan updates have been received from counties.

Additionally, the Illinois EPA’s seven regional offices and 18 counties, the Ambraw Valley Solid Waste Agency and the City of Chicago have been delegated the authority to inspect landfills, transfer stations and compost sites in their jurisdictions, providing a needed service to the citizens of Illinois. All of these activities are reflected in this publication.

The Illinois EPA hopes you will find this information useful and instructive and welcomes your comments and suggestions as to how it may be improved.

Renee Cipriano
Director
Illinois EPA
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*Nonhazardous Solid Waste Management and Landfill Capacity in Illinois: 2000*
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THIS IS THE ILLINOIS EPA’S 14TH ANNUAL REPORT describing the management of nonhazardous municipal solid waste by the state’s solid waste landfills and transfer stations. The report is divided into sections representing Illinois EPA administrative regions.

Each regional section includes specification pages describing the chief physical characteristics of each landfill. Provided are: its location and hours of operation, tipping fee, quantities of wastes received for the last three years, the landfill’s certified remaining capacity for the last two reporting dates, solid waste management fees paid in 2000, the Agency regional field office or delegated local authority that inspects the facility, and the name, address and phone number of the landfill’s owner and operator.

Similar but scaled down specification pages are included for each transfer station. In all, this report includes details of 67 landfills, 90 transfer stations and 52 compost facilities.

Illinois municipal solid waste landfills are required to report to the Illinois EPA the quantities of solid waste they receive each year, and to calculate and report the amount of remaining capacity existing on the first day of the following year.

During 2000, 53 landfills reported receiving a total of 49.3 million gate cubic yards of waste. This volume was 1.3 million gate cubic yards less than the total received during 1999, a 2.5 percent decrease.

As of Jan. 1, 2001, 53 landfills reported having a combined remaining capacity of 743.4 million gate cubic yards, or 49.3 million gate cubic yards less than on Jan. 1, 2000, a decrease of 6.2 percent.

Dividing wastes disposed during 2000 by capacity remaining on Jan. 1, 2001, indicates a landfill life expectancy in Illinois of 15 years, at 2000 disposal rates, barring capacity adjustments, until capacity is depleted state-wide. However, close proximity of landfills to the waste generation site and also ownership of the facility can affect where waste is deposited.
Nonhazardous Solid Waste Management And Landfill Capacity

2000
Municipal solid waste is the term used to describe the garbage discarded by America’s households, stores, offices, factories, restaurants, schools and other institutions. “Discarded” most often means disposed of in Agency-permitted landfills. Increasing amounts are handled through other means of solid waste management: recycling and composting.

In 2000, Illinois landfills accepted nearly 14.9 million tons of solid waste. The U.S. EPA’s Municipal Solid Waste in the United States: 1999 Facts & Figures says that nationwide 57 percent of solid waste was landfilled, 27.8 percent was recycled or composted and 15 percent was incinerated. National figures for 2000 were not published at the printing of this report.

Most Illinois waste was discarded in landfills within our borders. Wastes entering and leaving the state are not believed to affect this equation. Of all solid wastes landfilled in Illinois in 2000, 10 percent, or about 5.1 million tons, came from out of state. We know this because Illinois landfills must report these quantities to the Illinois EPA. However, waste haulers are not required to report how much Illinois waste they transport to landfills in other states or from which counties waste is transported.

Some is recycled

County recycling coordinators in Illinois claim that more than 35.1 percent of all wastes were recycled in 2000, meaning this portion was not landfilled. Recycling coordinators place total generated wastes at about 15.1 million tons. But this total does not take recycling into account. It appears that perhaps the municipal waste generation rate is higher than reported; the amount imported is greater than exported; or the reported recycling rate is higher than the actual rate.

Very little is incinerated

In Illinois, figures show only one percent of solid waste in Illinois was incinerated in 2000, compared to the amount landfilled. Robbins Resource Recovery Facility received 207,095 tons (683,413 cubic yards) of waste in suburban Chicago in 2000, a 45 percent decrease from 1999. This site was permitted to operate on June 2, 1997 and closed in November 2000, for business reasons.

What’s happening in the solid waste business in Illinois?

- Same number of active landfills as in 1999, (53 total), with larger capacities
- Consolidation of waste management companies, resulting in many changes in ownership and operation
- More transfer of wastes out of metropolitan Chicago area into Indiana and north and central Illinois counties
- Continued increase in pollution control facilities under private ownership and operation
- Two new landfills are under development in Southern Illinois
- More siting of transfer stations in

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Consolidation of the Waste Industry in the USA

The Illinois waste industry has consolidated in recent years. Waste Management, Inc. (WMI) and Allied Waste Industries (AW) are companies that underwent mergers during 1998-99.

The largest companies in the world are:

1. **Waste Management Inc.** includes WMI (formerly #1)/USA Waste (formerly #3)/Eastern Services

2. **Allied Waste Industries** includes most of BFI (formerly #2)/Allied Waste (formerly #5)/American Disposal

The largest company, Waste Management, has moved its world headquarters from Oak Brook, Ill. to Houston, Tex. Another Illinois company, American Disposal Company of Burr Ridge, was bought by Scottsdale, Ariz. based Allied Waste.

Allied Waste also purchased Metro Chicago area transfer stations formerly owned by Liberty Waste Services and Illinois Recycling Services.

Other companies such as Onyx/Superior and Republic Services now own landfills and transfer stations in Illinois, which were divested in the

About $1 million per acre

Developing a landfill requires enormous investments in land and equipment totaling millions of dollars, plus engineering expenses, fees to state and local governments, taxes, normal operating costs and additional millions set aside for post-closure care. One industry rule of thumb says it takes about $1 million per acre to design, build, permit, operate and conduct post-closure care at a landfill today.

Demands for capital and increasing technology requirements are among the reasons for the increasing privatization of the waste industry. Of the 53 active landfills profiled in this report, 46 percent are privately owned and 51 percent are privately operated.

<table>
<thead>
<tr>
<th>USA’s Top Waste Management Companies: 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Number of Waste Collection Companies</strong></td>
</tr>
<tr>
<td>WMI1</td>
</tr>
<tr>
<td>650</td>
</tr>
<tr>
<td><strong>Number of Landfills</strong></td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td><strong>Number of Transfer Stations</strong></td>
</tr>
<tr>
<td>293</td>
</tr>
<tr>
<td><strong>Number of Waste to Energy Facilities</strong></td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td><strong>Number of Recycling Companies</strong></td>
</tr>
<tr>
<td>190</td>
</tr>
</tbody>
</table>

**Rankings:**

1. *Waste Management Inc.* (WMI) boasts $12.5 billion in revenue, covers N. American continent and Puerto Rico
2. *Allied Waste Industries* (AW) boasts $5.7 billion in revenue, covers 40 states
3. *Republic Services* (Republic) makes $2.1 billion in revenue, covers 22 states
4. *Onyx/Superior* makes $1 billion in revenue, covers 12 states

Source: Company Annual Reports and Web Sites

Strategies of Waste Companies During and After Mergers

<table>
<thead>
<tr>
<th>Waste Company</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Disposal (now Allied) &amp; Allied Waste</td>
<td>Purchased Pittsburgh-based Liberty Waste Services, Ltd. (Illinois/Indiana); Illinois Recycling Services in Chicago metro area; and most of BFI’s facilities.</td>
</tr>
<tr>
<td>Republic Services</td>
<td>Purchased Southern Illinois Regional Landfill and several transfer stations.</td>
</tr>
<tr>
<td>Onyx/Superior Services</td>
<td>Purchased Macon County Landfill in Central Illinois, several transfer stations and Zion Landfill in Chicago suburbs, and Orchard Hills Landfill (Ogle County).</td>
</tr>
</tbody>
</table>
**Landfills are developed cell by cell**

Landfills are divided into sections called cells, which are developed as needed, filled systematically so much so that specific loads can be located weeks or months later, and covered with soil or other materials to prevent the spread of odors and vermin.

Trucks arriving at a landfill are inspected for prohibited nonhazardous wastes (Illinois bans landfilling of liquids, motor oil, whole tires and landscape wastes) and for hazardous wastes. Loads are weighed and details about them are recorded. They are then taken to the currently exposed portion of the active cell, which is known as the working face.

Trucks empty their loads at the working face, where specially modified bulldozers spread and compact the waste, crushing it to eliminate air pockets and squeezing it into the smallest space possible.

In 2000, 53 Illinois landfills accepted more than 49.3 million cubic yards of solid wastes. A ranking of these facilities (Appendix C) finds the top three landfills received one-third of wastes. This unequal distribution of wastes creates a large difference between an average landfill, which would have accepted more than 930 thousand cubic yards (about 281 thousand tons) of wastes and a median landfill, which would have received some 507 thousand cubic yards (almost 154 thousand tons).

**Closings cut capacity**

Several landfills shut their gates between 1998 and 2001. The dates when these landfills ceased accepting waste follow: Region 2: CDT Landfill (6-9-00), Mallard Lake Landfill (3-13-99), Region 3: Pekin Landfill (11-18-98), Peoria City/County Landfill #1 (4-10-98), and Watts Landfill (3-20-98). Peoria City/County Landfill #1 is also certified closed as of May 18, 1999. The only landfill to close during 2001 was Region 2: Wheatland Prairie RDF, on June 18th.

Landfills projecting closure dates prior to the end of 2002 are Region 1: Freeport Municipal LF #4, Region 2: Sexton #2 (Congress Development Co. LF) and Region 6: South Chain of Rocks RDF.

Region 4’s Coles Co. Landfill and Streator Area Landfill #3 and Region 7: Saline County LF are planning to expand their permitted disposal areas and have permit applications that are currently under review.

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**“Subtitle D Rules” Caused Drop in Number of Landfills**

Federal authority to regulate disposal of municipal solid waste is based on provisions in Subtitle D of the Resource Conservation and Recovery Act (RCRA). The federal Clean Air and Clean Water Acts also affect disposal of these wastes.


In October 1991, the U.S. EPA developed new landfill rules that became mandatory for all state landfill regulatory and permitting programs. These are sometimes known as Subtitle D rules.

Landfills that were operating when the Subtitle D rules were implemented were forced to choose between complying with stricter regulations or closing in the prescribed manner.

Whether it was the effect of tougher Subtitle D rules, the result of other business considerations, or a combination, one thing is clear: between 1992 and 1994, the number of active landfills in Illinois fell from 106 to 59 — a drop of 44 percent, as illustrated on page 7.

The total number of landfills has remained steady in 1999 and 2000. Fifty-three (53) landfills actively accepted waste in 2000 and reported capacity as of Jan. 1, 2001.
**Gate Cubic Yards and Tons**

Illinois landfills are required to report to the Illinois EPA the quantities of wastes received during each calendar year. They must also calculate how much capacity remains available for future waste disposal.

These figures are submitted to the Agency in gate cubic yards, or the volume of waste entering the landfill’s gate. Remaining capacities are expressed as _certified_ gate cubic yards, meaning that the calculations have been certified as true and accurate by a licensed professional engineer. These numbers are found in the landfill specification pages in each regional section of this report.

The term in-place cubic yard is used to indicate wastes that have been compressed to a half or a third or a quarter of their original volume, depending on the degree of compaction achieved by the landfill.

Gate cubic yards can be difficult to visualize. To aid the reader, we have divided gate cubic yards by an industry standard of 3.3 to achieve approximate tons.

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Section 4 of the Illinois Solid Waste Management Act requires the Agency to “publish a report regarding the projected disposal capacity available for solid waste in sanitary landfills. . . . Such reports shall present the data on an appropriate regional basis. . . [and] shall include an assessment of the life expectancy of each site.”

This legislative mandate explains why the main body of this report is organized by seven Illinois EPA administrative regions, and why landfill capacity and life expectancy are emphasized in nearby tables and charts, and in text, tables, map symbology and landfill specification pages in the regional sections.

Other states which write a report similar to this one are Florida, Indiana, Washington and Virginia. For more information contact Peter Gorier, Florida Dept. of Environmental Protection at 850-487-9532; Michelle Weddle, Indiana Dept. of Environmental Management at 317-233-4624; Ellen Caywood, Washington Dept. of Ecology at 206-459-6259; and John Ely, Virginia Dept. of Environmental Quality at 804-698-4249. Virginia’s report is only available on the internet.

**U.S. EPA’s MSW Report, 1999**


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**Illinois Landfills: Wastes Accepted in 2000 Versus 1999**

<table>
<thead>
<tr>
<th>Region</th>
<th>2000 Accepting Wastes</th>
<th>Wastes Accepted, Cu. Yds.</th>
<th>Yearly Change</th>
<th>2000 Wastes Share of State Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>One: Northwestern Illinois</td>
<td>8</td>
<td>8,550,620</td>
<td>-726,360</td>
<td>17.3</td>
</tr>
<tr>
<td>Two: Chicago Metropolitan</td>
<td>14</td>
<td>13,435,437</td>
<td>-2,393,573</td>
<td>27.3</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>8</td>
<td>4,454,557</td>
<td>+99,639</td>
<td>9.0</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>9</td>
<td>12,772,784</td>
<td>+1,796,686</td>
<td>25.9</td>
</tr>
<tr>
<td>Five: West Central Illinois</td>
<td>4</td>
<td>1,770,921</td>
<td>-39,755</td>
<td>3.6</td>
</tr>
<tr>
<td>Six: Metropolitan East St. Louis</td>
<td>6</td>
<td>6,369,788</td>
<td>-150,000</td>
<td>12.9</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
<td>4</td>
<td>1,938,073</td>
<td>+154,028</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>53</td>
<td>49,292,180</td>
<td>-1,259,335</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1 Includes facilities that accepted municipal waste for less than full year.


3 Includes 5,088,313 cubic yards of out-of-state wastes (10% of state total) accepted by 28 Illinois landfills during 1999.
Per capita views alter perspectives

Perhaps even more revealing is the table below, which views waste and landfill capacities on a per capita basis. Regions 2 and 7 have the lowest remaining capacity per capita. These regions are the only areas whose remaining capacity per capita is below the State average. This is probably due to the fact that the City of Chicago has 16 transfer stations, Cook County has 26 and there are another 14 in surrounding counties. Some of these transfer stations undoubtedly ship waste out of the region or out-of-state into Wisconsin or Indiana. For Southern Illinois, the additional capacity brought by two new facilities under development may help increase their capacity figures in 2001.

We also must take into account waste transportation across borders of the counties and the adjacent states, such as Missouri in the East St. Louis Metro Region. If Region Six continues as a net importer shown in the table by its 54 percent import rate, it could run short on landfill space in 20 years. Cottonwood Hills RDF, in St. Clair County, opened in November 2000, will help alleviate this situation. In Region Two, because of the moratorium against landfills in the City of Chicago, other areas of Region 2 will have to build new landfills, expand existing landfills or else transfer of waste will occur to other States (Wisconsin and Indiana) and counties in North and Central Illinois. Any limits to out-of-state waste disposal in these states, or capacity shortage, will affect the Chicago metropolitan area and cause a local shortage of landfill disposal space.

Statewide, while the number of active landfills fell sharply when more stringent regulations took affect in 1994, the average landfill capacity grew close to 14.7 million tons in 2000, and down to 14.0 million tons in 2001. The waste landfilled has remained in a narrow range for the past 10 years.

<table>
<thead>
<tr>
<th>State of Origin</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri</td>
<td>74%</td>
</tr>
<tr>
<td>Iowa</td>
<td>18%</td>
</tr>
<tr>
<td>Indiana</td>
<td>3%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>4%</td>
</tr>
<tr>
<td>Other States</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

1 30 landfills accepted waste from 12 states in 2000.

2 Arkansas, Kansas, Kentucky, Michigan, Minnesota, Nebraska, Ohio, and Tennessee

### Wastes Disposed and Landfill Capacity Per Capita; Landfill Life Expectancy

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>One: Northwestern Illinois</td>
<td>794,513</td>
<td>8,550,620</td>
<td>10.8</td>
<td>159,606,000</td>
<td>200.9</td>
<td>19</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Two: Chicago Metropolitan</td>
<td>8,121,136</td>
<td>13,435,437</td>
<td>1.7</td>
<td>92,794,000</td>
<td>11.4</td>
<td>7</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>761,207</td>
<td>4,454,557</td>
<td>5.9</td>
<td>179,727,000</td>
<td>236.1</td>
<td>40</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>854,287</td>
<td>12,772,784</td>
<td>15.0</td>
<td>106,418,000</td>
<td>124.6</td>
<td>8</td>
<td></td>
<td>8</td>
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<tr>
<td>Five: West Central Illinois</td>
<td>557,076</td>
<td>1,770,921</td>
<td>3.2</td>
<td>56,830,000</td>
<td>102.0</td>
<td>32</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Six: Metropolitan East St. Louis</td>
<td>705,847</td>
<td>6,369,788</td>
<td>9.0</td>
<td>122,585,000</td>
<td>173.7</td>
<td>19</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
<td>439,319</td>
<td>1,938,073</td>
<td>4.4</td>
<td>25,403,000</td>
<td>57.8</td>
<td>13</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>12,233,385</strong></td>
<td><strong>49,292,180</strong></td>
<td><strong>4.0</strong></td>
<td><strong>743,363,000</strong></td>
<td><strong>60.8</strong></td>
<td><strong>15</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Remaining capacity divided by wastes disposed. Tells how long a region may be served by local landfills at current disposal rates, barring capacity adjustments, until capacity is depleted.
Capacity decreases documented on Jan. 1, 2001

In a year that brought a 6.2 percent decrease in landfill capacity, 41 of 53 Illinois landfills had less space available on Jan. 1, 2001, than on Jan. 1, 2000. But, landfill capacity in Illinois, for the most part, has grown over the past 10 years. That growth has come from two sources: expansions of existing facilities and development of new landfills.

The table below compares landfills’ remaining capacities in “snapshots” taken Jan. 1, 2000, and Jan. 1, 2001. Total capacity dropped nearly 50 million cubic yards year to year.

Landfill capacity dipped more than 13.8 percent in Region 5 from one year to the next. No region reported an increase in capacity, although a few landfills may have opened new cells during that time period.

Of particular concern is Region 2, the Chicago metropolitan region.. Capacity in that region decreased over nine percent in this reporting year and siting and developing new landfills can take several years. Refer to page R2.2 of this report for details about this issue.

Location of active and new landfills are noted on a map on page 17.

### Landfill Capacity Increases Since Jan. 1, 2001: Expansions at Existing Facilities

<table>
<thead>
<tr>
<th>Region</th>
<th>Landfill</th>
<th>Municipality</th>
<th>County</th>
<th>Status</th>
<th>In-Place Cu. Yds.</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>Atkinson Landfill #2²</td>
<td>Atkinson</td>
<td>Henry</td>
<td>PR</td>
<td>10.2 mil.</td>
<td>Lateral &amp; Vertical</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>Knox County Landfill</td>
<td>Watega</td>
<td>Knox</td>
<td>PR</td>
<td>4.2 mil.</td>
<td>Vertical</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>Coles County Landfill</td>
<td>Charleston</td>
<td>Coles</td>
<td>PA</td>
<td>&lt; 1 mil.</td>
<td>Vertical</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>Coles County Landfill</td>
<td>Charleston</td>
<td>Coles</td>
<td>PR</td>
<td>1.1 mil.</td>
<td>Lateral</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>Landfill 33</td>
<td>Effingham</td>
<td>Effingham</td>
<td>PR</td>
<td>1.2 mil.</td>
<td>Vertical</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
<td>Saline County Landfill</td>
<td>Harrisburg</td>
<td>Saline</td>
<td>PR</td>
<td>4.3 mil.</td>
<td>Vertical &amp; Lateral</td>
</tr>
</tbody>
</table>

Total 22 mil.

¹PR: Permit under review; PA: Permit approved
²Formerly Henry County Landfill
New Facilities Permitted Since Jan. 1, 2001

<table>
<thead>
<tr>
<th>Region</th>
<th>Landfill</th>
<th>Municipality</th>
<th>County</th>
<th>Disposal Area (acres)</th>
<th>Design Acreage (cu. yds.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seven: Southern</td>
<td>Perry Ridge Landfill¹</td>
<td>DuQuoin</td>
<td>Perry</td>
<td>141</td>
<td>14.5 mil.</td>
</tr>
<tr>
<td>Illinois</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven: Southern</td>
<td>West End Disposal Facility²</td>
<td>Harrisburg</td>
<td>Saline</td>
<td>125</td>
<td>14.9 mil.</td>
</tr>
<tr>
<td>Illinois</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>266</td>
<td>29.4 mil.</td>
</tr>
</tbody>
</table>

¹ Includes space for waste, intermediate or daily cover and capacity (in-place cubic yards)
² Permit approved, site now being developed.

Landfill Capacity Is Abundant Despite Same Number of Facilities

At the end of each year, Illinois landfill operators calculate how much waste they can accept in the future. This volume is known as remaining or available capacity, and is expressed in gate cubic yards, meaning waste received at the landfill’s gate, before it is compacted. One industry rule of thumb says 10 gate cubic yards of waste can be compressed into 5 compacted cubic yards. Obviously, the greater the compaction, the more waste can be buried.

Tight Regulations Force Cutbacks

Pushing Survivors To Build Capacity

Average Landfill Capacity Grows

While Disposal Rates Remained Constant

Municipal Waste Management Plans and Plan Updates

The Solid Waste Planning and Recycling Act requires all Illinois counties and the city of Chicago to develop, adopt and implement 20-year municipal waste management plans.

Every five years, each plan must identify changes in planning areas, evaluate progress in plan implementation and, if necessary, revise plan recommendations and goals. The county also has the option of updating its solid waste generation rate. The plan is then submitted to the Illinois EPA for review and comment.

Questions concerning these plans should be directed to the appropriate local administrators listed in Appendix K of this report.

Results of Illinois Recycling Economics Study

The National Recycling Economic Information Study, conducted by R.W. Beck on behalf of the National Recycling Coalition (NRC), and commissioned by the U.S. EPA, identified and documented the impact of the recycling/reuse industries in the United States. Illinois was among 12 states researched. Preliminary results show that Illinois hosts over 2,400 recycling and re-use establishments employing 56,000 people, generating a $1.8 billion payroll and earning $12 billion in annual revenues. Visit the NRC website at www.nrc-recycle.org for more detail.

1 R.W. Beck Inc. contact: Jonathan Burgiel at 407-422-4911 or jburgiel@rwbeck.com
2 NRC contact: Kate Krebs at 703-683-9025 or katek@nrc-recycle.org

Municipal Waste Management in Illinois: 2000

Municipal waste figures accepted at Illinois landfills (see table on page 4) show that 49.2 million cubic yards (or 14.9 million tons) was disposed in 53 landfills. This amount shows 73 percent of the municipal waste stream as managed by the state’s landfills.

Many compost sites are located at landfills to manage landscape waste which is banned from disposal. Agency permitted compost facilities accepted 363,075 tons in 2000. The percentage composted is one percent of the municipal waste stream. (See table on page 10.)

In 2000, a small amount of suburban Chicago’s waste, one percent of the municipal waste stream, was incinerated at Robbins Resource Recovery Facility. The amount incinerated appears in the table on page 11 as 207,095 tons. Because this site closed, it will no longer be available as an option for solid waste management in 2001.

Local governments have surveyed haulers and recycling centers to determine the amount of recycling in their areas. Recycling surveys voluntarily submitted by recycling coordinators report 5.3 million tons of the waste stream is recycled. This number includes data from other years, and is viewed as the most recent available data (see page 9). Waste generation and recycling figures were prepared in many cases during the solid waste planning process several years ago. In many cases, no new research has been done since then.

Landfilling continues to play the largest role in the handling of the municipal waste stream in Illinois. It is estimated that three-quarters of the waste stream is handled using this method of disposal.
Recycled amount is increasing

The amount of municipal waste recycled in the state rose less than one percent from 1999’s figure, which also rounded to 5.3 million tons. The percent recycled rose from 35 percent in 1999 to 35.1 percent in 2000 state-wide. Many local governments report that they have not only met, but have exceeded local recycling goals mandated by the Solid Waste Planning and Recycling Act.

### Municipal Wastes Generated & Recycled

<table>
<thead>
<tr>
<th>Region</th>
<th>Population</th>
<th>Waste Generated</th>
<th>Waste Recycled</th>
</tr>
</thead>
<tbody>
<tr>
<td>One: Northwestern Illinois</td>
<td>794,513</td>
<td>826,767</td>
<td>245,786</td>
</tr>
<tr>
<td>Two: Chicago Metropolitan</td>
<td>8,121,136</td>
<td>10,937,982</td>
<td>4,207,346</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>761,207</td>
<td>932,987</td>
<td>245,191</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>854,287</td>
<td>939,320</td>
<td>225,465</td>
</tr>
<tr>
<td>Five: West Central Illinois</td>
<td>557,076</td>
<td>431,045</td>
<td>115,785</td>
</tr>
<tr>
<td>Six: Metropolitan East St. Louis</td>
<td>705,847</td>
<td>644,848</td>
<td>216,062</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
<td>439,319</td>
<td>388,699</td>
<td>51,567</td>
</tr>
<tr>
<td>Total</td>
<td>12,233,725</td>
<td>15,101,648</td>
<td>5,307,340</td>
</tr>
</tbody>
</table>

### State Solid Waste & Recycling Grants

The Department of Commerce and Community Affairs (DCCA), Bureau of Energy and Recycling supports a number of grants to governments, not-for-profit organizations and businesses.

For information about grant programs promoting recycling efforts, contact these DCCA staff members.

**Division and Contact Person**

- **Recycling & Waste Reduction Division**
  - Reg Willis, Manager
  - Phone: 217-782-7887

- **Resource Recovery Section**
  - Jeff Markland, Manager
  - Phone: 217-524-0933

- **Resource Development Section**
  - Dean Bair, Manager
  - Phone: 217-785-2006

- **Education, Research and Development**
  - Ron Swager, Manager
  - Phone: 217-785-3498

For information about recycling publications contact the Solid Waste Clearinghouse at 800-252-8955 (Illinois only) or 217-785-0211 (out-of-state).

For information regarding the U.S. EPA/National Recycling Coalition/R.W. Beck study on recycling economics, contact Ron Swager at the number above.

### Who to Call for Help With Specific Waste Problems

The Illinois EPA supports a number of waste disposal and recycling efforts aimed at helping households and selected institutions safely dispose of household hazardous waste, scrap tires, leftover paint, used motor oil, educational hazardous waste, and more.

To obtain the latest information about these programs, or to learn the dates, times and locations of drop-off collections, please call one of the following:

- Dan Rion, at 217-782-9294, concerning scheduling of Household Hazardous Waste collections;

- Tap Hefley, at 217-524-4655, concerning scrap/used tire disposal;

- Dave Saladino, at 217/558-4115 concerning high school laboratory hazardous waste and used fluorescent and high intensity light bulb disposal;

- Dave Anderson, at 217/558-2574, concerning what to do with waste paint and used motor oil.
Delegated inspection program

The Illinois EPA has delegated inspection authority to 18 county agencies, Ambraw Valley Solid Waste Agency and Chicago. This program takes advantage of additional manpower at the local level.

Delegation agreements authorize these agencies to conduct many of the duties that would otherwise be performed by an Illinois EPA field office: investigating suspected violations of land pollution laws and reports of open dumping, and inspecting landfills, transfer stations and compost facilities permitted through the Agency’s Bureau of Land. Inspections can also include industrial landfills and monofilms (private facilities that do not accept municipal solid waste).

Thousands of inspections of pollution control facilities and other sites were completed by delegated agencies during 2000. These efforts at the local level stimulate the regulated community to take all necessary steps to comply with environmental regulations. Also, prompt response by local authorities does much to curtail open dumping, unfortunately a common practice throughout Illinois.

Composting is increasing by seven percent a year

Landscape wastes were banned from Illinois landfills beginning July 1, 1990. Since then the number of active compost facilities has begun to approach the number of active landfills, and may exceed them in a few years.

As might be expected, composting is most common in Region Two, where 45 percent of the state’s landscape wastes in 2000 were processed.

Compost facilities report to the Agency each year the quantities of wastes accepted. In 2000, the state’s compost facilities processed 363,088 tons of landscape wastes, a one percent increase over 1999’s total of 357,991 tons.

Landscape wastes processed in 2000 represent only about one percent of total wastes landfilled in Illinois that year. While this percentage is small, it is important to note that composting kept more than 360,000 tons of wastes out of landfills. Each ton of waste not landfilled is a ton of landfill capacity preserved.

New compost sites mentioned in the 14th annual report are Joyce Farms, Illinois State University (ISU) Compost Site and Excel Corp. Compost Facility.

<table>
<thead>
<tr>
<th>Compost Facilities: Wastes Handled 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
</tr>
<tr>
<td>One: Northwestern Illinois</td>
</tr>
<tr>
<td>Two: Chicago Metropolitan</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
</tr>
<tr>
<td>Five: West Central Illinois</td>
</tr>
<tr>
<td>Six: Metropolitan East St. Louis</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Compost Sites Mentioned in Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
</tr>
<tr>
<td>Two</td>
</tr>
<tr>
<td>Four</td>
</tr>
<tr>
<td>Five</td>
</tr>
</tbody>
</table>
Closure of Robbins Resource Recovery Facility

On Sept. 15, 2000, operations were suspended at the Robbins Resource Recovery Facility, which filed for relief under Chapter 11 of the Bankruptcy Code, and directed 11 contracting municipalities to deliver their waste to Homewood Disposal Service Inc. Controversies arose among the parties regarding continued force and effect of the waste disposal agreements under this arrangement.

Effective July 31, 2001, long term waste disposal agreements with Robbins Resource Recovery Partners were terminated. These agreements obligated the communities to dispose of all municipal waste at the waste-to-energy facility in Robbins at a fixed price for a twenty year term.

Gerald F. Munitz, of Goldberg, Kohn, Bell, Black, Rosenbloom and Moritz, Ltd. served as bankruptcy counsel for the 11 municipalities and the Southern Suburban Solid Waste Agency in the settlement discussions that resolved all outstanding disputes and resulted in termination of the waste disposal agreements.

Transfer Stations: Wastes Handled 2000

<table>
<thead>
<tr>
<th>Region</th>
<th>Active Facilities</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>One: Northwestern Illinois</td>
<td>7</td>
<td>130,288</td>
</tr>
<tr>
<td>Two: Chicago Metropolitan</td>
<td>56</td>
<td>4,319,155</td>
</tr>
<tr>
<td>Three: Peoria/Quad Cities</td>
<td>4</td>
<td>19,830</td>
</tr>
<tr>
<td>Four: East Central Illinois</td>
<td>6</td>
<td>125,896</td>
</tr>
<tr>
<td>Five: West Central Illinois</td>
<td>3</td>
<td>1,076</td>
</tr>
<tr>
<td>Six: Metropolitan East St. Louis</td>
<td>5</td>
<td>49,990</td>
</tr>
<tr>
<td>Seven: Southern Illinois</td>
<td>2</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>83</strong></td>
<td><strong>4,646,235</strong></td>
</tr>
</tbody>
</table>

In 2000, 80 transfer stations handled 4.6 million tons of trash, or nearly one third of wastes landfilled statewide. If the number of active landfills falls from 53 in 2000, to the mid-40s, or even the upper-30s, over the next decade, the number of transfer stations can be expected to grow, as will the amount of wastes they will handle.

The Agency attempted to get data from transfer stations, but not all of the facilities chose to voluntarily return the survey, so transferred amounts are under-represented in this report.

Amount incinerated for energy recovery or volume reduction is small

An additional 207,095 tons (683,413 cubic yards) of waste was received at the Robbins Resource Recovery Facility in suburban Chicago in 2000, a 45 percent decrease from 1999. For business reasons, the waste-to-energy facility closed in late 2000.

Incinerator: Wastes Handled 2000

<table>
<thead>
<tr>
<th>Region</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two: Chicago Metropolitan †</td>
<td>207,095</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>207,095</strong></td>
</tr>
</tbody>
</table>

† Robbins Resource Recovery Facility


11
Pollution Control Facility Siting Costs in Chicago Metropolitan Area

There are no large tracts of land left in Cook County to build municipal waste landfills. Development and construction of a transfer station requires smaller parcels of land ranging in size from six to 14 acres. Smaller properties might suffice, but design costs would escalate. Total costs to site a transfer station in Chicago might range from $150,000 - $300,000 plus property costs. Included in this total are costs associated with legal negotiations and engineering design. Additional costs in an urban area would be those required to follow fire and building codes.

Transfer stations storing landscape waste over 24 hours do not require local siting approval, but do require an Agency permit. Municipal waste transfer stations that accept refuse might also wish to collect and process recyclable items, including metals and construction and demolition materials.

Because the Chicago Department of Environment has additional permitting and zoning requirements, it may be easier to site a transfer station in the suburbs rather than in the City. Examples of recent construction of transfer stations show extremes between state-of-the-art facilities and low tech facilities. For example, Wheeling Township Transfer Station (Cook Co./ Glenview) built in 1994, at a cost of $12 million. On the DuPage and Kane County border, built in March 1999, DuKane Transfer Station’s entire cost is estimated at one million dollars. This includes the purchase of 5.2 acres, siting studies, design work, engineering studies, application fee of $120,000, hearing and court costs. This facility manages approximately 1,500 tons per day and is a fairly low-tech operation. Details about each of these sites (and others developed and constructed recently) are found on pages R2.24 to R2.85.

Permitting Requirements of Illinois EPA

New landfills or landfill expansions cannot be built unless the Bureau of Land issues a permit. Issuance of a Bureau of Air permit to a landfill identifying it as a potential new source of air pollution must also be obtained.

An initial completeness review normally takes 30 days. If omissions are found, the application is rejected as incomplete. The applicant then has 35 days to provide additional information to make an application complete.

Once an application is found to be complete, technical reviews are done. Rather than sending out a formal denial letter, the reviewer prepares a draft denial letter which explains the areas in the application that are deficient. The applicant has a choice of either providing some additional information in the form of an addenda to the original application or asking the reviewer for a formal denial that could be appealed to the Illinois Pollution Control Board. Additional information is usually provided. Approval or denial of a permit application takes 180 days, unless an extension is granted.

Approval and/or denial of permit applications

During the review period, comments are solicited from Bureau of Land’s Regional Office, Groundwater Assistance Unit and the Solid Waste Unit. After review of the applications, the addenda, and comments from public officials, the general public and the regional office, final action is ready to be taken.

If the reviewers have found the application to completely adhere to applicable environmental regulations, then the permit is approved outright or with special conditions. If there is something wrong with the application that either cannot be fixed or the applicant is unwilling to fix, then, the Permit Section denies the permit.

If the application is denied, an owner/operator could submit a new application, appeal the Agency’s denial of the permit through the Illinois Pollution Control Board or they could abandon the project. Most choose to submit a new application, starting the 180-day process over.

Permits for landfills contain detailed requirements for the design, construction, capacity and operation of the landfills. They also contain stringent requirements for monitoring the groundwater beneath and around the landfill to detect releases from the landfill that would adversely impact the quality of the groundwater. Finally, the permit contains detailed requirements to properly "close" the landfill once it has been filled to permitted capacity and to provide for proper care of the landfill after it has been closed.
From time to time, the owner/operator of a landfill must modify the facility’s permit. These modifications can address many things, including changes in construction and/or operational practices; construction of cells within the permitted landfill boundaries and groundwater monitoring issues.

**Closure and post-closure care time period**

Once a landfill has received its permitted volume of waste, it must be “closed” in accordance with an approved plan. Proper closure of a landfill includes establishing a proper grading plan to allow for precipitation to run off the landfill, constructing a final cover over the waste to minimize the amount of precipitation which can infiltrate the landfill, establishing a vegetative cover system over the final cover system to minimize its erosion and finalizing the gas and leachate management systems of the landfill to ensure that the gas and leachate generated in the landfill after the landfill is closed can be properly managed.

After a landfill has been properly closed, it must then receive at least 30 years of post-closure care. Proper post-closure care includes maintaining the vegetative cover to ensure it does not erode, monitoring the groundwater to ensure there have been no releases to it from the landfill and removing the gas and leachate generated in the landfill to ensure that they do not have adverse impacts on the area surrounding the landfill.

Closure activities, depending on the site, may include: capping the landfill; installing monitoring devices if they are not already in place; providing topsoil, seeding, and mulching as necessary; and possibly converting the land for follow-up use. Routine post-closure care continues for 30 years after a landfill stops accepting waste and includes maintaining the surface cover, monitoring gas and leachate, pumping and transporting leachate, if necessary, and monitoring groundwater. Estimates for both closure and post-closure care costs must be based on an engineering estimate of the cost for a third party to perform the necessary work and maintenance. Financial assurance is also required for corrective action, such as remediation of catastrophic events like fire, severe erosion and groundwater contamination.

**Financial Assurance Requirements**

Funding for landfill closure, post-closure maintenance and corrective action must be provided by the landfill owners and operators, ensuring costs are not borne by taxpayers. Many different mechanisms are available to help landfill owners prove now that they will be able to pay later.

Financial assurance mechanisms for landfill closure and long-term care fall into three broad categories: cash-in-hand, in the form of trust funds or escrow accounts; third-party insurance, including letters of credit and surety bonds; and various types of self-insurance. Self-insurance can include a financial test, a guarantee by a parent corporation or government entity, or deferred funding in the form of pledge of revenues. The state can further determine which mechanisms are allowable for publicly and privately owned landfills and how landfill owners and operators must provide accounting.

Closure and long-term cost estimates are revisited annually for active landfills. For those which closed under Part 807 regulations, review takes place every two years. Costs are updated based on the remaining capacity in the landfills, and any adjustments made for estimated costs of future leachate disposal, a big part of post-closure maintenance expenses, increased costs for electricity and labor and other items. The funds available must be adequate to cover the projected costs.

For more information, about Illinois regulations regarding financial assurance contact Blake Harris, Bureau of Land, at 217-785-8604.
Solid Waste Landfill Terms Defined

Closure: procedure that a solid or hazardous waste management facility undergoes to cease operations and ensure protection of human health and the environment in the future.

Final Cover System: the materials or layers (i.e., erosion/vegetative layer, infiltration/barrier layer, drainage layer) installed over the top of a closed landfill to minimize infiltration and erosion.

Leachate: any liquid, including any suspended components in the liquid, which percolated through or drained from waste.

Operation & Maintenance: activities conducted at a site after a final response action has concluded, to ensure that the treatment and containment system is functioning properly. This may include: grading, seeding and mowing the vegetative layer, monitoring and repairing gas and leachate collection systems; treating collected leachate; and maintaining and repairing the physical integrity of drainage control structures.

Response Action: an action taken to reduce or control risks to human health and the environment.

Site investigation: a study designed to gather data needed to determine the nature and extent of contamination.

Illinois FIRST -- 33 Abandoned Landfills Targeted for Clean-up

In March 1999, as part of Governor George H. Ryan’s Illinois FIRST legislation (a mechanism to provide funds for infrastructure, roads, schools and transit), the General Assembly appropriated $50 million to remediate 33 abandoned landfills located in 21 counties throughout the state. Although these landfills stopped accepting waste, they were not properly closed. Resulting risks include leachate entering the groundwater aquifers and migrating into a drinking water source, contaminated surface waters from run-off, explosions from methane build-up, odors, presence of vectors and other rodents, exposure to pathogens, infectious wastes or hazardous substances present in the exposed refuse and uneven terrain or landslides due to differential settling or unstable slopes.

The remediation work at these landfills will include pumping out accumulated leachate (rainwater that has been in contact with the decaying garbage), constructing a new and improved soil cover to prevent future rainwater infiltration into the landfill, grading and slope stabilization and seeding for vegetation. Several years of post-remedial care will also be necessary for maintenance and monitoring.

After the remedial work is complete, as many as 12 of these abandoned landfills may be available for use as safe open space, such as parks and wildlife areas, or serve municipal functions as city garages or parking lots.

A total of 33 abandoned landfills are identified that require State funding to insure protection of public health and the environment. The Illinois FIRST funding includes $10 million each for five State Fiscal Years during 2000-2004.

Separate appropriations totaling $15 million were approved for stabilizing and remedial work on what the Illinois EPA had identified as the “worst” site, Paxton II in southwest Chicago, due to an imminent threat of a collapse of a portion of the landfill.

The Illinois EPA will make every effort to recover the State’s remedial costs from the responsible parties.

For more information on Illinois EPA’s response, a report entitled Illinois First Abandoned Landfill Program is available on our Bureau of Land website; click on the clean-up programs and state response program authority links. ◆
Regional offices are located in Rockford, Des Plaines, Peoria, Champaign, Springfield, Collinsville and Marion.

Regional offices are located in Rockford, Des Plaines, Peoria, Champaign, Springfield, Collinsville and Marion.
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Landfills:  Active, Closed, Under Development

- Spoon Ridge Landfill (Inactive since 6-30-96)
- Sangamon Valley Landfill (Inactive since 2-27-95)
- Cottonwood Hills RDF (Opened Nov. 2000)
- Perry Ridge Landfill (Under development)

- 53 Landfills Which Accepted Waste in 2000.
- Spoon Ridge RDF in Fulton Co. and Sangamon Valley Landfill are both currently inactive. Perry Ridge Landfill and West End Disposal are under development in 2001.
- Landfills Which Closed during 1999 or first half of 2000.